Air Quality - Global - v3.0

Domain Portfolio: Lifestyle | Domain: Health | Usage Classification: Standard

Geography: Global (any land area)

Attribution Required: YES

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- Air quality observed values should be disseminated in accordance with the AQI and corresponding RGB colors as directed in the Appendix: Air Quality Index Table.
- If observational data are used for analyses, displayed on web pages, or used for other programs or products, the analysis results, displays, or products must indicate that these data are preliminary.
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NOTE:

- Not all pollutants are returned for all the scales
- Each scale has set pollutants returned

Overview

The Global Air Quality API includes an overall Air Quality Index, Air Quality Category Index and Category. This API also includes the principal pollutant type, measurement, index number and level, and any applicable health recommendation text. The Global Air Quality geographical coverage includes all land based areas in the world.

HTTP Headers and Data Lifetime - Caching and Expiration

For details on appropriate header values as well as caching and expiration definitions, please see **The Weather Company Data | API Common Usage Guide**.

Translated Fields:

This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported codes).

- airQualityCategory
- category
- disclaimer
- phrase
- text
- title
- source

URL Construction

Atomic API URL Examples:	**Aggregate Product Name**	**v3-wx-globalAirQuality**
Request by Geocode: Required Parameters: geocode, language, scale, format, apiKey https://api.weather.com/v3/wx/globalAirQuality?**geocode=<geocode>**&language=<language>&scale=<scale>&format=<format>&**apiKey=<ApiKey>**		
https://api.weather.com/v3/wx/globalAirQuality?**geocode=39.904,116.407**&language=en-US&scale=EPA&format=json&**apiKey=yourAPIKey**		
Request by IATA Code: Required Parameters: iataCode, language, scale, format, apiKey https://api.weather.com/v3/wx/globalAirQuality?**iataCode=<iataCode>**&language=<language>&scale=<scale>&format=<format>&**apiKey=<ApiKey>**		
https://api.weather.com/v3/wx/globalAirQuality?**iataCode=FCO**&language=en-US&scale=EPA&format=json&**apiKey=yourAPIKey**		
Request by ICAO Code: Required Parameters: icaoCode, language, scale, format, apiKey https://api.weather.com/v3/wx/globalAirQuality?**icaoCode=<icaoCode>**&language=<language>&scale=<scale>&format=<format>&**apiKey=<ApiKey>**		
https://api.weather.com/v3/wx/globalAirQuality?**icaoCode=LIRF**&language=en-US&scale=EPA&format=json&**apiKey=yourAPIKey**		
Request by Place ID: Required Parameters: placeid, language, scale, format, apiKey https://api.weather.com/v3/wx/globalAirQuality?**placeid=<placeid>**&language=<language>&scale=<scale>&format=<format>&**apiKey=<ApiKey>**		
https://api.weather.com/v3/wx/globalAirQuality?**placeid=25d07eca1bcda02800c1a9e699d7eb1c8132cad9bc2d6efa8a2531f0ee4a81cd**&language=en-US&scale=EPA&format=json&**apiKey=yourAPIKey**		
Request by Postal Key: Required Parameters: postalKey, language, scale, format, apiKey https://api.weather.com/v3/wx/globalAirQuality?**postalKey=<postalKey>**&language=<language>&scale=<scale>&format=<format>&**apiKey=<ApiKey>**		
https://api.weather.com/v3/wx/globalAirQuality?**postalKey=30339:US**&language=en-US&scale=EPA&format=json&**apiKey=yourAPIKey**		

Valid Parameter Definitions

Parameter Name	**Valid Parameter Value**	**Description**
scale	EPA, HJ6332012, ATMO, UBA, DAQI, NAQI, IMECA, CAQI	Air Quality Scale. A user can select any scale for any point in the world. Governments will usually select a specific scale for data they produce. Currently supported scales indicated here.

Selected Data Scale Code by Government

Country Name	AQI Scale Code
United States	EPA
China	HJ6332012
France	ATMO
Germany	UBA
United Kingdom of Great Britain and Northern Ireland (the)	DAQI
India	NAQI
Mexico	IMECA
Spain	CAQI

Data Elements & Definitions

Field Name	Description	Type	Range	Sample	Nulls Allowed
globalairquality	**Response Section Header: Non Repeating Elements**	**object**			
latitude	Latitude	decimal	N/A	33.65 Note - returned with 2 digits of precision	N
longitude	Longitude	decimal	N/A	-84.43 Note - returned with 2 digits of precision	N
source	Data must be attributed as: "Powered by <source>[year]"	string	Powered by Copernicus Atmosphere Monitoring Service Information [Year]	Powered by Copernicus Atmosphere Monitoring Service Information [2018]	N
disclaimer	Neither the European Commission nor ECMWF is responsible for any use of this information.	string	Neither the European Commission nor ECMWF is responsible for any use of this information.	Neither the European Commission nor ECMWF is responsible for any use of this information.	N
airQualityIndex	Air quality index	decimal	0 to unbounded	61	N
airQualityCategory	Air quality category	string	See Appendix - Category Index Range	Moderate	N
airQualityCategoryIndex	Index summarizing the air quality categories	integer	See Appendix - Category Index Range	2	N
airQualityCategoryIndexColor	Air Quality Category Index Scale to Color	string	See Appendix - Air Quality Category Index Scale to Color	#90D32D	N
primaryPollutant	Indicates primary pollutant	string	O3 = Ozone CO: Carbon Monoxide NO2: Nitrogen Dioxide SO2: Sulfur Dioxide PM2.5: Particulate matter less than 2.5 microns PM10: Particulate matter less than 10 microns	PM2.5	N
expireTimeGmt	Expiration time in UNIX seconds	integer		1369252800	N

messages	**messages**	**object**			
title	Named message type	string	General, Sensitive Groups	General	N
text	Message verbiage	string		Members of sensitive groups may experience health effects. The general public is not likely to be affected.	N
pollutants	**pollutants**	**object**			
name	Pollutant name	string	O3 CO NO2 SO2 PM2.5 PM10	PM2.5	N
phrase	Pollutant description	string	Ozone, Carbon Monoxide, Nitrogen Dioxide, Sulfur Dioxide, Particulate matter less than 2.5 microns, Particulate matter less than 10 microns	Ozone	N
amount	Measure of concentration of pollutant.	decimal		485.25	N
unit	Pollutant Unit	string	ug/m3	µg/m3	N
category	Pollutant Category	string	See Appendix - Category Index Range	Moderate	N
categoryIndex	Pollutant Category Index	decimal	See Appendix - Category Index Range	2	N
index	Pollutant index	decimal	Positive Integer	22	N

JSON Sample

```
// Response Collapsed for Presentation Purposes
{
  "globalairquality": {
    "latitude": 76.6,
    "longitude": 87.5,
    "source": "Powered by Copernicus Atmosphere Monitoring Service",
    "disclaimer": "Neither the European Commission nor ECMWF is responsible for any use of this information",
    "airQualityIndex":101,
    "airQualityCategory": "Unhealthy for Sensitive Groups",
    "airQualityCategoryIndex": 3,
    "airQualityCategoryIndexColor": "039963",
    "primaryPollutant": "PM2.5",
    "pollutants": {
      "NO2": {
        "name": "NO2",
        "phrase": "Nitrogen Dioxide",
        "amount": 41.4,
        "unit": "ug/m3",
        "category": "Good",
        "categoryIndex": 1,
        "index": 21
      },
      "O3": {
        "name": "O3",
        "phrase": "Ozone",
        "amount": 110.0,
        "unit": "ug/m3",
        "category": "Good",
        "categoryIndex": 1,
        "index": 50
      },
      "SO2": {
        "name": "SO2",
        "phrase": "Sulfur Dioxide",
        "amount": 26.2,
        "unit": "ug/m3",
        "category": "Good",
        "categoryIndex": 1,
        "index": 14
      },
      "PM2.5": {
        "name": "PM2.5",
        "phrase": "Particulate matter less than 2.5 microns",
        "amount": 35,
        "unit": "ug/m3",
```

```
            "category": "Unhealthy for Sensitive Groups",
            "categoryIndex": 3,
            "index": 101
        },
        "PM10": {
            "name": "PM10",
            "phrase": "Particulate matter less than 10 microns",
            "amount": 154.5,
            "unit": "ug/m3",
            "category": "Moderate",
            "categoryIndex": 2,
            "index": 100
        },
        "CO": {
            "name": "CO",
            "phrase": "Carbon Monoxide",
            "amount": 8020.3,
            "unit": "ug/m3",
            "category": "Moderate",
            "categoryIndex": 2,
            "index": 76
        }
    },
    "messages": {
        "Sensitive Group": {
            "title": "Sensitive Groups",
            "text": "Reduce prolonged or heavy exertion. It's OK to be active outside, but take more breaks and do less intense activities. Watch for symptoms such as coughing or shortness of breath."
        },
        "General": {
            "title": "General",
            "text": "Members of sensitive groups may experience health effects. The general public is not likely to be affected."
        }
    },
    "expireTimeGmt": 1521748800
  }
}
```

Appendix: Category Index Range

AQI Scale Code	Cat Index 1 range	Cat Index 2 range	Cat Index 3 range	Cat Index 4 range	Cat Index 5 range	Cat Index 6 range	Cat Index 7 range	Cat Index 8 range	Cat Index 9 range	Cat Index 10 range
ATMO	Very Good	Very Good	Good	Good	Moderate	Poor	Poor	Bad	Bad	Very Bad
CAQI	Very Low	Low	Medium	High	Very High					
DAQI	Low	Moderate	High	Very High						
EPA	Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy	Very Unhealthy	Hazardous				
HJ6332012	Excellent	Good	Lightly Polluted	Moderately Polluted	Heavily Polluted	Severely Polluted				
IMECA	Good	Regular	Bad	Very Bad	Extremely Bad					
NAQI	Good	Satisfactory	Moderately Polluted	Poor	Very Poor	Severe				
UBA	Very Good	Good	Moderate	Bad	Very Bad					

Appendix: Air Quality Category Index Scale to Color

AQI Scale Code	Cat Index 1 color (best)	Cat Index 2 color	Cat Index 3 color	Cat Index 4 color	Cat Index 5 color	Cat Index 6 color	Cat Index 7 color	Cat Index 8 color	Cat Index 9 color	Cat Index 10 color (worst)
ATMO	84BF75	84BF75	84BF75	84BF75	F29400	F29400	F29400	D82517	D82517	D82517
CAQI	5DBF67	BAD04E	F9C103	FF8B04	A90C00					
DAQI (see next appendix)	9CFF9C	FFFF00	FF6464	CE30FF						
EPA	00E838	FFFF24	FF7200	FF0000	9D3D8C	8D0021				
HJ6332012	039963	FFDE34	FF9125	E50124	6C0F91	8D031D				
IMECA	9ACC00	FFFF00	FF9A00	FF0000	800080					
NAQI	01C966	6AE261	FBFF26	FF9F00	FF0000	F70004				
UBA	00F3E8	00D0A7	F5E645	FF4041	A9002A					

Appendix: DAQI Index Scale to Color

The DAQI scale is unique in that official color is based on the “index” field rather than the “categoryIndex”. In some applications, it may be desirable to show the color mapping based on “index” rather than “category index”. These provide a smoother gradient between magnitudes. The set listed in the previous appendix are simpler estimates.

AQI Scale Code	Index 1 color (best)	Index 2 color	Index 3 color	Index 4 color	Index 5 color	Index 6 color	Index 7 color	Index 8 color	Index 9 color	Index 10 color (worst)
DAQI	9CFF9C	31FF00	31CF00	FFFF00	FFCF00	FF9A00	FF6464	FF0000	990000	CE30FF

Appendix: Country to Air Quality Scale - Full List

Note

- For Countries without their own Air Quality Index Scale specified, EPA Scale is suggested as the default Air Quality Index Scale.

Country Name	Air Quality Index Scale
Afghanistan	EPA
Åland Islands	EPA
Albania	EPA
Algeria	EPA
American Samoa	EPA
Andorra	EPA
Angola	EPA
Anguilla	EPA
Antarctica	EPA
Antigua and Barbuda	EPA
Argentina	EPA
Armenia	EPA
Aruba	EPA
Australia	EPA
Austria	EPA
Azerbaijan	EPA
Bahamas (the)	EPA
Bahrain	EPA
Bangladesh	EPA
Barbados	EPA
Belarus	EPA
Belgium	EPA

Belize	EPA
Benin	EPA
Bermuda	EPA
Bhutan	EPA
Bolivia (Plurinational State of)	EPA
Bonaire, Sint Eustatius and Saba	EPA
Bosnia and Herzegovina	EPA
Botswana	EPA
Bouvet Island	EPA
Brazil	EPA
British Indian Ocean Territory (the)	EPA
Brunei Darussalam	EPA
Bulgaria	EPA
Burkina Faso	EPA
Burundi	EPA
Cabo Verde	EPA
Cambodia	EPA
Cameroon	EPA
Canada	EPA
Cayman Islands (the)	EPA
Central African Republic (the)	EPA
Chad	EPA
Chile	EPA
China	HJ6332012
Christmas Island	EPA
Cocos (Keeling) Islands (the)	EPA
Colombia	EPA
Comoros (the)	EPA
Congo (the Democratic Republic of the)	EPA
Congo (the)	EPA
Cook Islands (the)	EPA
Costa Rica	EPA
Côte d'Ivoire	EPA
Croatia	EPA

Cuba	EPA
Curaçao	EPA
Cyprus	EPA
Czechia	EPA
Denmark	EPA
Djibouti	EPA
Dominica	EPA
Dominican Republic (the)	EPA
Ecuador	EPA
Egypt	EPA
El Salvador	EPA
Equatorial Guinea	EPA
Eritrea	EPA
Estonia	EPA
Ethiopia	EPA
Falkland Islands (the) [Malvinas]	EPA
Faroe Islands (the)	EPA
Fiji	EPA
Finland	EPA
France	ATMO
French Guiana	EPA
French Polynesia	EPA
French Southern Territories (the)	EPA
Gabon	EPA
Gambia (the)	EPA
Georgia	EPA
Germany	UBA
Ghana	EPA
Gibraltar	EPA
Greece	EPA
Greenland	EPA
Grenada	EPA
Guadeloupe	EPA
Guam	EPA

Guatemala	EPA
Guernsey	EPA
Guinea	EPA
Guinea-Bissau	EPA
Guyana	EPA
Haiti	EPA
Heard Island and McDonald Islands	EPA
Holy See (the)	EPA
Honduras	EPA
Hong Kong	EPA
Hungary	EPA
Iceland	EPA
India	NAQI
Indonesia	EPA
Iran (Islamic Republic of)	EPA
Iraq	EPA
Ireland	EPA
Isle of Man	EPA
Israel	EPA
Italy	EPA
Jamaica	EPA
Japan	EPA
Jersey	EPA
Jordan	EPA
Kazakhstan	EPA
Kenya	EPA
Kiribati	EPA
Korea (the Democratic People's Republic of)	EPA
Korea (the Republic of)	EPA
Kuwait	EPA
Kyrgyzstan	EPA
Lao People's Democratic Republic (the)	EPA
Latvia	EPA
Lebanon	EPA

Lesotho	EPA
Liberia	EPA
Libya	EPA
Liechtenstein	EPA
Lithuania	EPA
Luxembourg	EPA
Macao	EPA
Macedonia (the former Yugoslav Republic of)	EPA
Madagascar	EPA
Malawi	EPA
Malaysia	EPA
Maldives	EPA
Mali	EPA
Malta	EPA
Marshall Islands (the)	EPA
Martinique	EPA
Mauritania	EPA
Mauritius	EPA
Mayotte	EPA
Mexico	IMECA
Micronesia (Federated States of)	EPA
Moldova (the Republic of)	EPA
Monaco	EPA
Mongolia	EPA
Montenegro	EPA
Montserrat	EPA
Morocco	EPA
Mozambique	EPA
Myanmar	EPA
Namibia	EPA
Nauru	EPA
Nepal	EPA
Netherlands (the)	EPA
New Caledonia	EPA

New Zealand	EPA
Nicaragua	EPA
Niger (the)	EPA
Nigeria	EPA
Niue	EPA
Norfolk Island	EPA
Northern Mariana Islands (the)	EPA
Norway	EPA
Oman	EPA
Pakistan	EPA
Palau	EPA
Panama	EPA
Papua New Guinea	EPA
Paraguay	EPA
Peru	EPA
Philippines (the)	EPA
Pitcairn	EPA
Poland	EPA
Portugal	EPA
Puerto Rico	EPA
Qatar	EPA
Réunion	EPA
Romania	EPA
Russian Federation (the)	EPA
Rwanda	EPA
Saint Barthélemy	EPA
Saint Helena, Ascension and Tristan da Cunha	EPA
Saint Kitts and Nevis	EPA
Saint Lucia	EPA
Saint Martin (French part)	EPA
Saint Pierre and Miquelon	EPA
Saint Vincent and the Grenadines	EPA
Samoa	EPA
San Marino	EPA

Sao Tome and Principe	EPA
Saudi Arabia	EPA
Senegal	EPA
Serbia	EPA
Seychelles	EPA
Sierra Leone	EPA
Singapore	EPA
Sint Maarten (Dutch part)	EPA
Slovakia	EPA
Slovenia	EPA
Solomon Islands	EPA
Somalia	EPA
South Africa	EPA
South Georgia and the South Sandwich Islands	EPA
South Sudan	EPA
Spain	CAQI
Sri Lanka	EPA
Sudan (the)	EPA
Suriname	EPA
Svalbard and Jan Mayen	EPA
Swaziland	EPA
Sweden	EPA
Switzerland	EPA
Syrian Arab Republic	EPA
Taiwan (Province of China)	EPA
Tajikistan	EPA
Tanzania, United Republic of	EPA
Thailand	EPA
Timor-Leste	EPA
Togo	EPA
Tokelau	EPA
Tonga	EPA
Trinidad and Tobago	EPA
Tunisia	EPA

Turkey	EPA
Turkmenistan	EPA
Turks and Caicos Islands (the)	EPA
Tuvalu	EPA
Uganda	EPA
Ukraine	EPA
United Arab Emirates (the)	EPA
United Kingdom of Great Britain and Northern Ireland (the)	DAQI
United States Minor Outlying Islands (the)	EPA
United States of America (the)	EPA
Uruguay	EPA
Uzbekistan	EPA
Vanuatu	EPA
Venezuela (Bolivarian Republic of)	EPA
Viet Nam	EPA
Virgin Islands (British)	EPA
Virgin Islands (U.S.)	EPA
Wallis and Futuna	EPA
Western Sahara*	EPA
Yemen	EPA
Zambia	EPA
Zimbabwe	EPA